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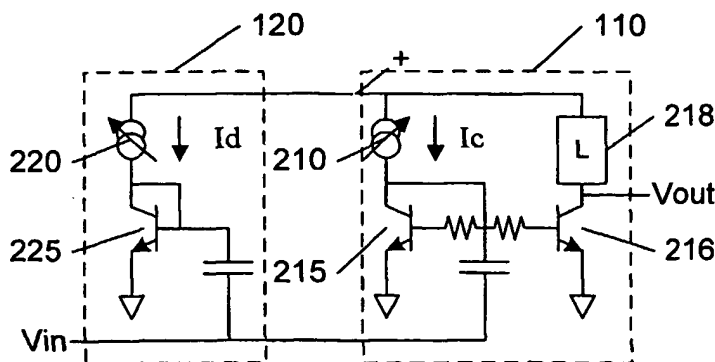


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- (71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (71) Applicant (for AE only): **U.S. PHILIPS CORPORATION** [US/US]; 1251 Avenue of the Americas, New York, NY 10510-8001 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **REDMAN-WHITE, William** [GB/US]; 1109 McKay Drive, M/S-41SJ, San Jose, CA 95131 (US). **AGGARWAL, Sudhir** [IN/US]; 1109 McKay Drive, M/S-41SJ, San Jose, CA 95131 (US).
- (54) Title: **VARIABLE GAIN AMPLIFIER WITH IMPROVED CONTROL CHARACTERISTICS LINEARITY**
- (57) Abstract: A variable-impedance device is placed in parallel with the input to a variable-gain amplifier, and is controlled so as to provide a substantially constant load impedance to a source. Preferably, the variable-impedance device includes a diode with a variable bias current. This diode bias current is adjusted inversely with the amplifier bias current, such that the parallel sum of the two input path impedances remains approximately constant across a wide range of gain. This variable gain amplifier system is particularly well suited for use in a wireless transmitter, or cellular telephone.
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
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INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H03G1/00 H03F1/32 H03F1/30 H03F3/343

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H03G H03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *G* document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Blaas, D-L

INTERNATIONAL SEARCH REPORT

International Application No

PCT 03/03512

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	US 3 512 096 A (AOKI NOBUHIKO ET AL) 12 May 1970 (1970-05-12) column 3, line 42 - column 4, line 21; figure 2 -----	1,10
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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